

CLAIMS

What is claimed is:

1. In a wireless network system comprising at least one access element for
5 communication with at least one remote client element, wherein the at least one
access element is operative to transmit neighbor messages, and at least one central
control element for controlling and managing wireless connections between access
elements and remote client elements, a method facilitating the initialization and
configuration of an access element, comprising
10 monitoring for wireless neighbor messages from at least one neighboring
access element, the neighbor messages identifying at least one central control
element and a corresponding computer network address;
 selecting a central control element;
 transmitting, using a corresponding computer network address, a request to
15 the selected central control element.
2. The method of claim 1 further comprising exchanging configuration information
with the selected central control element.
- 20 3. The method of claim 1 further comprising
 transmitting discovery requests over a wired computer network;
 monitoring for discovery responses to the discovery requests, each discovery
response identifying a central control element.
- 25 4. The method of claim 3 wherein the selecting step comprises selecting a central
control element identified in a wireless neighbor message or a discovery response.
5. The method of claim 3 wherein the selecting comprises selecting a central
control element identified in a wireless neighbor message and a discovery response.

6. The method of claim 2 wherein the information includes the computer network addresses of the central control elements in an administrative group associated with the selected central control element.

5

7. The method of claim 6 further comprising
after detecting the failure of the selected central control element,
selecting a second central control element from the administrative
group;

10

using the computer network address of the selected second central control element to exchange configuration information with the selected second control element.

8. The method of claim 2 wherein the exchanged information allows for operation
15 in an access point mode under the control of the selected central control element.

9. The method of claim 8 further comprising operating in an access point mode under control of the selected central control element.

20 10. The method of claim 9 further comprising

after detecting the failure of the selected central control element,
selecting a second central control element from the administrative
group;

25 using the computer network address of the selected second central control element to exchange information with the selected second control element.

11. In a wireless network system comprising at least one access element for communication with at least one remote client element, and at least one central control element for controlling and managing wireless connections between access

elements and remote client elements, a method facilitating the initialization and configuration of an access element, comprising

detecting at least one neighboring access element;

receiving at least one message from the at least one neighboring access
5 element, the at least one message identifying at least one central control element
and a corresponding computer network address;

selecting a central control element;

transmitting, using a corresponding computer network address, a request to
the selected central control element.

10

12. The method of claim 11 wherein the at least one message is a neighbor
message.

13. The method of claim 11 further comprising

15 establishing a wireless connection with a detected neighboring access
element to receive the at least one message.

14. An apparatus for wireless communication with at least one remote client
element and for communication with a central control element, comprising

20 a wireless transmit/receive unit for wireless communication with at least one
remote client element;

a network interface for communication with a central control element over a
computer network;

an access point module controlling the wireless transmit/receive unit and the
25 network interface, wherein the access point module is operative to:

establish and maintain, in conjunction with a central control element,
wireless connections with remote client elements,

receive control data from a central control element; and

a configuration module operative to:

monitor for wireless neighbor messages from at least one neighboring access element, the neighbor messages identifying at least one central control element and a corresponding computer network address;

select a central control element; and

5 transmit, using a corresponding computer network address, a request to the selected central control element.

15. The apparatus of claim 14 wherein the configuration module is further operative to exchange configuration information with the selected central control
10 element.

16. The apparatus of claim 14 wherein the configuration module is further operative to

transmit discovery requests over a wired computer network; and

15 monitor for discovery responses to the discovery requests, each discovery response identifying a central control element.

17. The apparatus of claim 16 wherein the configuration module is operative to select a central control element from the central control elements identified in
20 wireless neighbor messages and discovery responses.

18. The apparatus of claim 14 wherein the access point module is operative to tunnel wireless traffic associated with remote client elements to a central control element.

25

19. The apparatus of claim 14 wherein the access point module is operative to switch to a neighbor message mode at periodic intervals to transmit neighbor messages,

receive neighbor messages from neighboring wireless access devices,
and
process received neighbor messages.

5